

Title (en)
MULTIMODAL HYBRID DRIVE SYSTEM FOR VEHICLES EQUIPPED WITH PTO AND HYBRID VEHICLE EQUIPPED WITH PTO COMPRISING SAID DRIVE SYSTEM

Title (de)
MULTIMODALES HYBRIDES ANTRIEBSSYSTEM FÜR FAHRZEUGE MIT ZAPFWELLE UND HYBRIDFAHRZEUG MIT ZAPFWELLE MIT DIESEM ANTRIEBSSYSTEM

Title (fr)
SYSTEME DE TRACTION HYBRIDE MULTIMODAL POUR VÉHICULES AVEC PRISE DE PUISSANCE ET VÉHICULE HYBRIDE COMPRENANT UNE PRISE DE PUISSANCE ET UN TEL SYSTEME DE TRACTION

Publication
EP 3098106 A1 20161130 (EN)

Application
EP 16171401 A 20160525

Priority
IT UB20150744 A 20150526

Abstract (en)
Multimodal hybrid drive system for vehicles equipped with PTO, the system comprising an internal combustion engine (E), a first electric motor generator (D) and a second electric motor generator (C); wherein at least said first electric motor generator has a drive shaft having opposite ends, both accessible, wherein one of said ends defines a PTO which can be activated by means of a relative controllable joint (K), a transfer box (T) comprising three selectively connectable inputs (IN1, IN2, IN3) and a single output (OUT) intended to be associated with a vehicle driveline; wherein a first input (IN1) is intended to be associated with said internal combustion engine (E) by means of a relative controllable joint (A), a second input (IN2) is intended to be associated with said first electric motor generator (D) by means of a respective free end of a respective drive shaft and said third input (IN3) is intended to be associated with said second electric motor generator (C) by means of a respective free end of a respective drive shaft, and a fixed transmission ratio between each of said inputs (IN1, IN2, IN3) and said single output (OUT).

IPC 8 full level
B60K 17/28 (2006.01); **B60K 6/48** (2007.10)

CPC (source: EP)
B60K 6/48 (2013.01); **B60K 17/28** (2013.01); **B60K 2006/4808** (2013.01); **B60W 30/1888** (2013.01); **Y02T 10/62** (2013.01)

Citation (applicant)
• US 2850920 A 19580909 - PETSCH GERTRUDE H
• EP 2809539 B1 20151230 - FPT IND SPA [IT]
• EP 2620311 A1 20130731 - FPT IND SPA [IT]

Citation (search report)
• [A] US 2003100395 A1 20030529 - HIRAIWA KAZUYOSHI [JP]
• [A] DE 102011116935 A1 20130502 - AUDI AG [DE]
• [A] US 2011042155 A1 20110224 - TARASINSKI NICOLAI [DE], et al
• [A] US 2014034405 A1 20140206 - CANTEMIR CODRIN-GRUIE [US], et al
• [AD] US 2850920 A 19580909 - PETSCH GERTRUDE H
• [AD] EP 2620311 A1 20130731 - FPT IND SPA [IT]

Cited by
JPWO2019003712A1; CN114096428A; CN112512850A; CN113573964A; EP3932716A1; US12024859B2; US11273834B2; WO2019003712A1; WO2021005063A1; US11479115B2; WO2020025453A1; WO2020187905A1; US11618309B2; US12090830B2; WO2019003713A1; WO2022002485A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3098106 A1 20161130; EP 3098106 B1 20180131; ES 2667129 T3 20180509; IT UB20150744 A1 20161126

DOCDB simple family (application)
EP 16171401 A 20160525; ES 16171401 T 20160525; IT UB20150744 A 20150526